Hempstead DMS-100 DS0 632 Line MLHG	Data for Sunday March 3, 1996 (14.4/9.6)

HOURS	CALL ATTEMPTS	OVERFLOW	USAGE	CCS/LINE	HOLD TIME (min)	
12AM	1,884	36	21,151	33	19	
1AM	1,165	0	16,590	26	24	
2AM	547	0	9,570	15	29	
3AM	274	0	5,220	8	32	
4AM	103	0	3,193	5	52	
5AM	79	0	1,918	3	40	
6AM	94	0	1,313	2	23	
7AM	219	0	1,626	3	12	
8AM	560	0	3,103	5	9	
9AM	926	0	5,574	9	10	
10AM	1,314	0	8,397	13	11	
11AM	1,699	0	10,823	17	11	
12PM	1,812	0	12,144	19	11	
1PM	2,050	0	14,325	23	12	
2PM	2,191	0	16,096	25	12	
3PM	2,534	0	19,928	32	13	
4PM	2,859	180	21,983	35	14	
5PM	3,764	915	22,561	36	13	
6PM	2,839	185	21,046	33	13	
7PM	2,902	71	20,610	33	12	
8PM	5,621	3,019	22,641	36	15	
9PM	8,210	5,909	22,701	36	16	
10PM	7,251	4,931	22,714	36	16	$9.95/mo 1st 5 hrs
11PM	3,807	1,662	22,076	35	17	(each addit hr $2.95)
Total	54,704	16,908	327,303	22	14	

CCS/LINE

HOLD TIME (min)
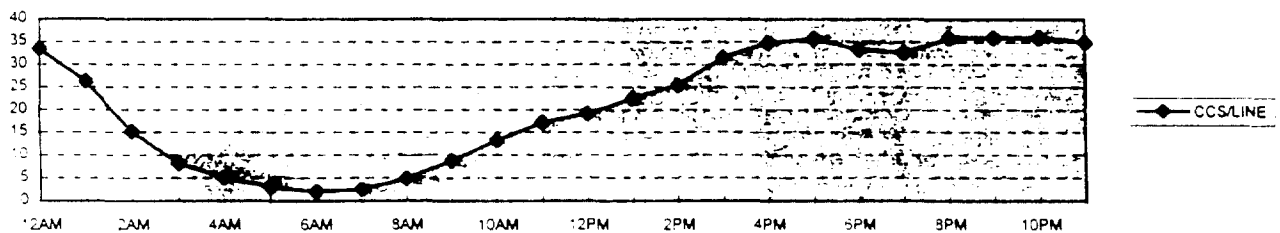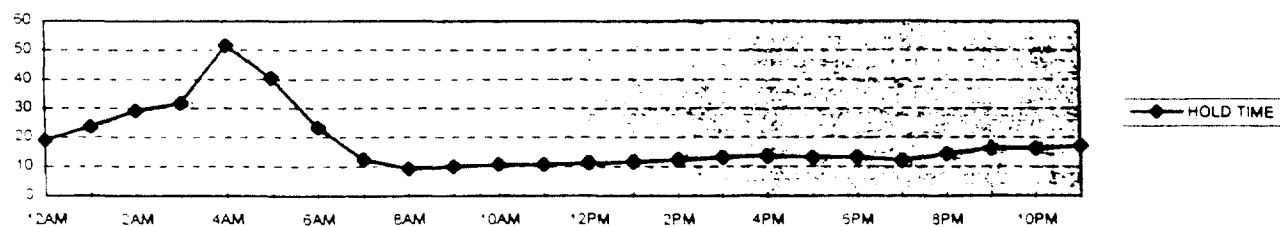
HOURS	CALL ATTEMPTS	OVERFLOW	USAGE	CCS/LINE	HOLD TIME (min)	
	Hempstead DMS-100 DS0		Data for Thursday February 8, 1996			
	22 Line MLHG	(28 8/14 4/9 6)				
12AM	564	539	786	36	52	
1AM	89	63	716	33	46	
2AM	8	0	454	21	95	
3AM	7	0	229	10	55	
4AM	3	0	166	8	92	
5AM	5	0	103	5	34	
6AM	7	0	179	8	43	
7AM	27	0	363	17	22	
8AM	24	0	386	18	27	
9AM	25	0	388	18	26	
10AM	22	0	497	23	38	
11AM	112	73	618	28	45	
12PM	158	120	749	34	33	
1PM	102	74	724	33	43	
2PM	59	18	643	29	26	
3PM	87	50	712	32	32	
4PM	179	153	784	36	50	
5PM	461	432	789	36	45	
6PM	254	230	781	36	54	
7PM	896	865	789	36	42	
8PM	714	682	790	36	41	
9PM	471	442	784	36	45	$9.95/mo 1st 5 hrs
10PM	508	472	788	36	36	(each addit hr $2.50)
11PM	573	549	791	36	55	$19.95/mo unlimited hrs
Total	**5,355**	**4,762**	**14,009**	**27**	**39**	

CCS/LINE
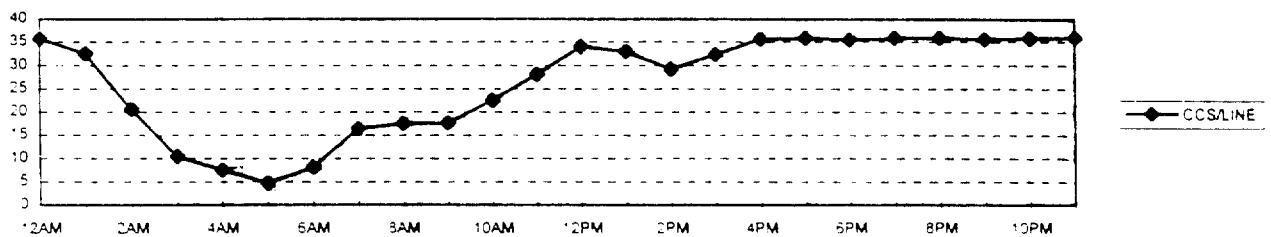
HOLD TIME (min)
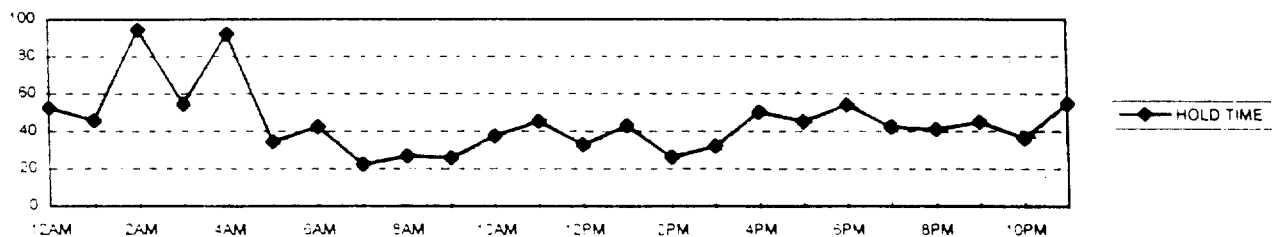
| | West St DMS-100 DS0 | | Data for Monday April 22, 1996 | | | |
| | 191 Line MLHG | | (28 8/14 4/9.6) | | | |

HOURS	CALL ATTEMPTS	OVERFLOW	USAGE	CCS/LINE	HOLD TIME (min)	
12AM	376	3	5,100	27	23	
1AM	302	0	4,973	26	27	
2AM	58	0	2,211	12	64	
3AM	26	0	1,270	7	81	
4AM	25	0	754	4	50	
5AM	35	0	251	1	12	
6AM	40	0	847	4	35	
7AM	81	0	1,181	6	24	
8AM	147	0	1,985	10	23	
9AM	260	0	2,910	15	19	
10AM	330	0	4,247	22	21	
11AM	233	0	3,789	20	27	
12PM	295	0	4,091	21	23	
1PM	278	0	3,930	21	24	
2PM	303	0	4,320	23	24	
3PM	315	0	4,436	23	23	
4PM	393	0	4,586	24	19	
5PM	318	0	4,771	25	25	
6PM	360	0	4,337	23	20	
7PM	348	0	4,230	22	20	
8PM	408	0	4,501	24	18	
9PM	420	0	4,530	24	18	$9.95/mo 1st 5 hrs
10PM	511	0	5,174	27	17	(each addit hr $2.50)
11PM	510	36	5,203	27	18	$19.95/mo unlimited hrs
Total	**6,372**	**39**	**83,627**	**19**	**22**	

CCS/LINE
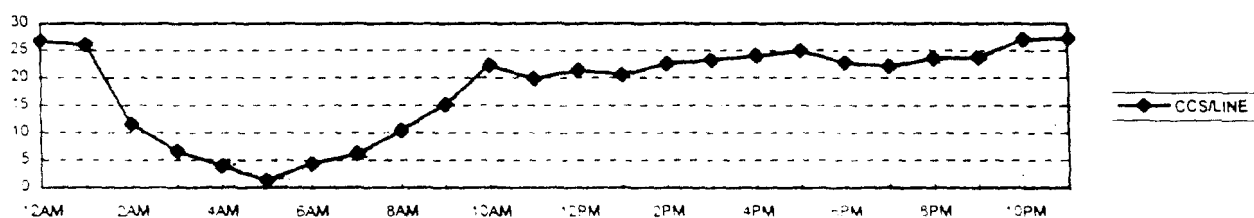
HOLD TIME
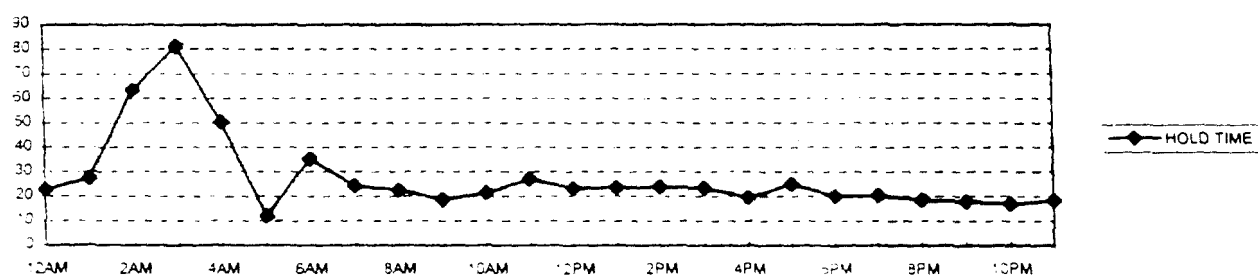
GRCYNYGCDS0 5ESS DS0   Data for Monday February 19, 1996
201 Line MLHG   (14 4)

HOURS	CALL ATTEMPTS	OVERFLOW	USAGE	CCS/LINE	HOLD TIME	
12AM	228	0	4,920	24	36	
1AM	93	0	3,520	18	63	
2AM	53	0	2,047	10	64	
3AM	36	0	1,618	8	75	
4AM	19	0	1,103	5	97	
5AM	15	0	663	3	74	
6AM	30	0	571	3	32	
7AM	85	0	697	3	14	
8AM	133	0	1,430	7	18	
9AM	177	0	1,636	8	15	
10AM	304	0	2,713	13	15	
11AM	309	0	3,621	18	20	
12PM	353	0	3,457	17	16	
1PM	272	0	3,402	17	21	
2PM	337	0	3,886	19	19	
3PM	291	0	4,370	22	25	
4PM	293	0	4,129	21	23	
5PM	357	0	4,587	23	21	
6PM	341	0	4,266	21	21	$9.95/mo 1st 5 hrs
7PM	361	0	4,002	20	18	(each addit hr $2.95)
8PM	386	0	4,880	24	21	$14.99/mo 1st 15 hrs
9PM	481	0	5,335	27	18	(each addit hr $2.95)
10PM	530	0	6,137	31	19	$29.99/mo 1st 30 hrs
11PM	337	0	5,606	28	28	(each addit hr $2.95)
Total	**5,821**	**0**	**78,596**	**16**	**23**	

CCS/LINE
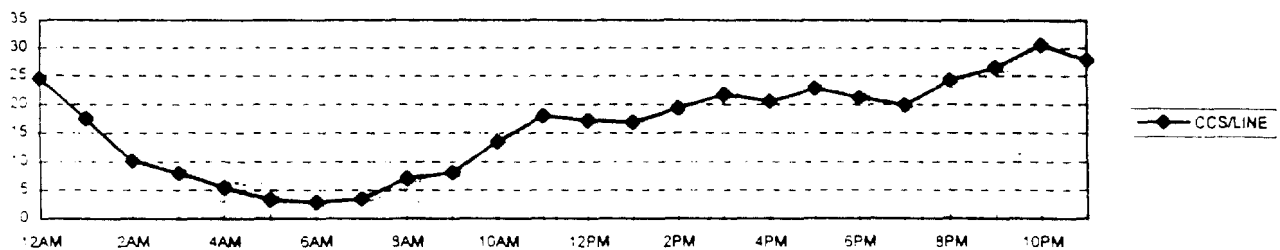
HOLD TIME (min)
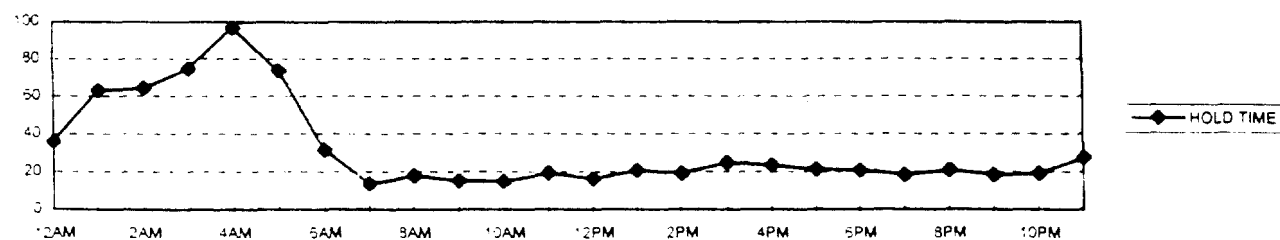
White PlainsDMS-100 DS0   Data for Tuesday February 20, 1996
128 Line MLHG   (14 4)

HOURS	CALL ATTEMPTS	OVERFLOW	USAGE	CCS/LINE	HOLD TIME (min)	
12AM	102	0	2.482	19	41	
1AM	45	0	1,521	12	56	
2AM	28	0	944	7	56	
3AM	8	0	492	4	103	
4AM	6	0	364	3	101	
5AM	8	0	264	2	55	
6AM	20	0	269	2	22	
7AM	53	0	465	4	15	
8AM	93	0	758	6	14	
9AM	126	0	1,023	8	14	
10AM	195	0	1,631	13	14	
11AM	204	0	1,085	8	9	
12PM	212	0	2,013	16	16	
1PM	191	0	2,345	18	20	
2PM	182	0	1,995	16	18	
3PM	200	0	2,105	16	18	
4PM	250	0	2,427	19	16	
5PM	269	0	2,534	20	16	
6PM	172	0	1,983	15	19	$9.95/mo 1st 5 hrs
7PM	214	0	2,132	17	17	(each addit hr $2.95)
8PM	264	0	2,771	22	17	$14.99/mo 1st 15 hrs
9PM	247	0	3,382	26	23	(each addit hr $2.95)
10PM	240	0	3,524	28	24	$29.99/mo 1st 30 hrs
11PM	206	0	3.132	24	25	(each addit hr $2.95)
Total	**3,535**	**0**	**41,641**	**14**	**20**	

CCS/LINE
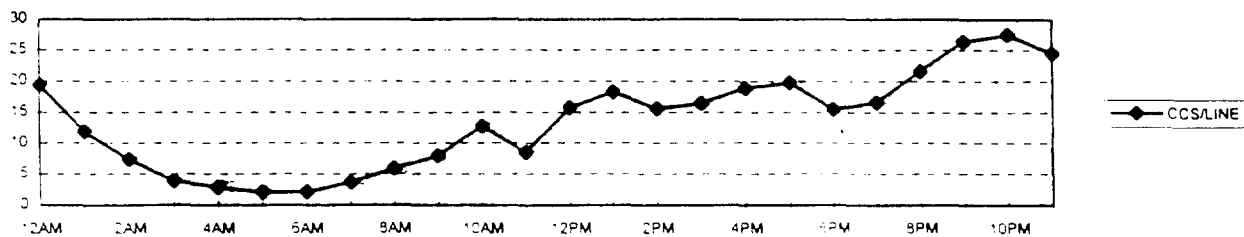
HOLD TIME (min)
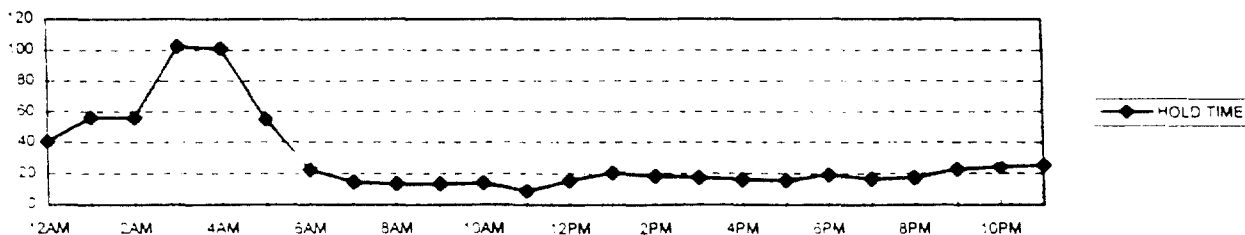
ATTACHMENT E

Technological Alternatives

Bell Atlantic and NYNEX are investigating various alternatives in an attempt to alleviate congestion problems on their networks. These alternatives are segregated into two categories: Overlay Network Architecture solutions and Data Off Load solutions. These solutions are designed to be used in connection with packet data networks such as Bell Atlantic's Internet Protocol Routing Service (IPRS) and NYNEX's Information Protocol Access Service (IPAS).

IPRS and IPAS provide for the collection, concentration and management of the ISPs' traffic within a LATA using the Transmission Control Protocol/Internet Protocol (TCP/IP) standard. These services consist of network routers (located at LATA hub sites) which collect dial-up or dedicated access data traffic, concentrate the traffic, and route it via packet data services between the ISP customer's network and its end users. Currently Switched Multimegabit Data Service ("SMDS") is the transport mechanism for IPRS, while IPAS will use Frame Relay ("FR") service for transport. ISPs purchase ports that provide 23 call paths and can be configured for analog, ISDN, DDS, DS1 or frame relay (56 kbps or 1.544 Mbps) IPRS does not include connections to the end user access service, which are provided through the existing circuit-switched public telephone network.

In addition to providing more efficient transport of Internet calls, IPRS and IPAS help to reduce the adverse impact on the circuit-switched network by alleviating congestion at the central offices that serve ISPs. They do not bypass the end user's originating central office switch, however, so they will not relieve congestion at that location.

IPRS became available in April 1996 (Bell Atlantic Tariff F.C.C. No. 1. Section 16). IPAS will be available later this year.

The following solutions are all under study. Neither Bell Atlantic nor NYNEX has determined whether any will be cost-effective, and neither company has committed to deploying them.

1. OVERLAY NETWORK ARCHITECTURE SOLUTIONS

The following alternatives use a separate network for transporting Internet traffic:

● **Data Interceptor Plans**

These involve the use of data intercept equipment to remove a significant portion of Internet traffic from the public switched network at the line side of the end user's serving switch. Specifically, these proposals include 1) deploying data interceptor equipment in front of the end user's serving switches to divert the heaviest Internet traffic volumes from the switch; 2) deploying equipment to concentrate Internet traffic from the data interceptors and the serving switch; 3) adding router equipment to existing hubs, and creating new hub routers to permit packet data handoff to ISPs if required; 4) augmenting the packet-switched data network where required; and 5) in some cases utilizing SS7 Queries to route Internet users to dedicated

equipment. This alternative will reduce congestion in originating and terminating switches and on inter-office networks, but its success depends upon all ISPs providing Bell Atlantic and NYNEX with up-to-date lists of their access telephone numbers.

● **Trunk Side Redirect to Overlay Network**

This alternative involves redirecting Internet traffic to a dedicated network after the traffic is switched through the serving switch, but minimizing the impact on other users of that switch, by 1) adding special line side equipment to the serving switch designed to eliminate call blocking; 2) augmenting the PSTN for ISDN traffic; 3) deploying equipment designed to concentrate Internet traffic from the data interceptors and the serving switch; 4) adding router equipment to existing hubs, and creating new hub routers to permit packet data handoff to ISPs if required; and 5) augmenting the packet-switched data network where required. Disadvantages are that 1) this alternative does not eliminate congestion on the line side of the customer's serving central office switch; 2) it requires a substantial investment; and 3) significant labor costs will be incurred to transfer lines from existing to new equipment.

2. DATA OFF LOAD SOLUTIONS

The following alternatives could be used to divert a portion of Internet traffic off of the existing or overlay networks:
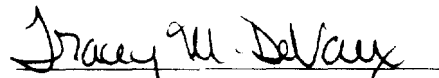
● **x Digital Subscriber Line (xDSL) Solution**

This alternative would use the proposed ISDN Digital Subscriber Line and Asymmetrical Digital Subscriber Line services. Initial analysis shows that this alternative will remove some traffic from the serving switch and the existing or overlay network. However, xDSL technology can currently be used in a limited number of locations, because it is compatible with only certain types of existing copper cable plant.

● **Switched Broadband Network (SBN) Solution**

This alternative involves transporting Internet data over a separate Switched Broadband Network. The advantages are: 1) it provides a totally integrated line: 2) it allows for high bandwidth; and 3) it has a high level of flexibility for future applications. The disadvantages include: 1) delay, because high speed data capability over the SBN will not be available until late 1998 at the earliest; 2) many unknowns, such as ease of deployment, network recovery, reliability, interoperability, need to be addressed before this technology can be used; 3) the cost and availability of customer premises equipment have not yet been addressed; 4) standards for this technology are not complete; 5) network monitoring systems have not been developed; and 6) the cost may be much higher than other solutions.

CERTIFICATE OF SERVICE

I hereby certify that on this 24th day of March, 1997 a copy of the foregoing "Joint

Comments of Bell Atlantic and NYNEX on Notice of Inquiry" was served by hand on the parties

on the attached list.

Tracey M. DeVaux
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Federal Communications Commission
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